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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/646,936	08/22/2003	Samuel D. Naffziger	200210023-1	3016

22879 7590 11/30/2004

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EXAMINER	
SHINGLETON, MICHAEL B	
ART UNIT	PAPER NUMBER
2817	

DATE MAILED: 11/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/646,936	NAFFZIGER ET AL.	
	Examiner	Art Unit	
	Michael B. Shingleton	2817	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE Three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is FINAL. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-34 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1, 2, 5-7, 12, 13, 16, 21, 23, 24, 26, 28-30, 32-34 is/are rejected.

7)☒ Claim(s) 3, 4, 8-11, 14, 15, 17-20, 22, 25, 27, 31 is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 5/22/03

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 28-30, and 32-34 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Brown 5,507,456 (Brown).

Figures 1 and 2 and the relevant text of Brown discloses a system for providing a temporarily modified output. Note Figure 2a and column 3 around line 1 wherein "FIG. 2a-d illustrated stepped-square waves used for signaling according to the invention herein". Thus any of the stepped-square waves shown in Figures 2a-d either singly or in combination can be used for signaling. Accordingly, during a "second" mode the output is composed of at least in part the common stepped-square wave having two steps, one of low level and one of high level like shown in Figure 2a. Also, accordingly during a "first" mode the output is composed of at least in part the illustrated stepped square wave shown in Figure 2b. Note that the intermediate level for the stepped-square wave is for a certain amount of time and thus Brown inherently includes a delay network that provides for this intermediate level. Also note that Brown recites in the paragraph bridging columns 3 and 4 that the stepped-square waveform generator that produces the stepped square waves as illustrated in Figures 2a-d can control the "amplitude and duty cycle of the waveform" and thus information can be encoded thereon. It is noted that Brown only prefers making a composite waveform which is the sum of two stepped-square waves. But even in this preferred waveform the composite waveform contains the claimed waveforms when operated in the claimed modes. Applicant should note that the claims only require that during a first mode that a certain waveform be provided at the output and does not exclude other waveforms being provided at that output as well. The device of Brown in producing a square wave like that shown in Figures 2a-d is fully capable as operating as a clock. A clock is in it simpliest form merely a square wave generator of constant frequency. Thus, Brown's circuit qualifies as a clock.

Claims 1, 2, 5, 6, 12, 16, 21, 23, 24, 28, 29, 30, 32, 33 and 34 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Mizokawa 4,170,715 (Mizokawa).

Figures 1-3 and the relevant text of Mizokawa disclose a system/clock generator and method for providing a temporarily modified output. This system of Mizokawa includes a waveform control that provides a control output at terminal "c" that temporarily adjusts to an intermediate level between normal high and low level during a first operating mode (Normal mode) when the NRZ data is a "1" and the SPM data is high (See Figure 3). When the NRZ data is a "1" and the SPM data is high this defines the "first operating mode". The second operating mode is defined by the case when the NRZ data is zero and the SPM data is "don't care" i.e. either high or low. During this operating mode as is clearly illustrated by Figure 3 of Mizokawa the waveform control provides the control output to transition periodically between the high and low levels. Note that the high level is greater than the intermediate level which is in between the high and low levels of the second operating mode. Clearly, the circuitry shown in Figures 1 and 2 inherently includes a delay network that sets forth i.e. controls the time of the intermediate level. The examiner must give the broadest reasonable interpretation to the claims consistent with the specification (See MPEP 904.01). The device of Mizokawa in producing a square wave like that shown in Figure 3 is fully capable as operating as a clock. A clock is in its simplest form merely a square wave generator of constant frequency. Thus, Mizokawa's circuit qualifies as a clock. Also note that elements 9 and10 being an amplifier assembly clearly qualifies as a driver. Note that the control output "c" is composed of a first control output and a second control output and the input to the driver "d" is composed of "at least first and second inputs" wherein "the control output provided by the waveform control further comprising a first control output that is provided to the first input of the driver and a second control output that is provided to the second input of the driver". The waveform control clearly "self-biases" to the intermediate level for it is the structure that provides the intermediate level. Again the examiner must give the broadest reasonable interpretation to the claims consistent with the specification (See MPEP 904.01). Note that the unshown but clearly present signal generators, the sources of signals a and b, are a "predriver" that is coupled to control the system mentioned above. Note that the element 24 forms a divider that controls the amplitude i.e. the intermediate level during the second operating mode (See column 3, around line 30).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at

the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 13 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mizokawa 4,170,715 (Mizokawa).

Mizokawa as applied above and the following: Mizokawa is silent on there being an associated circuit connected to the output of element 10, i.e. driver. The amplifier 10 is for reproducing the signal (See column 2, around line 62). The system of Mizokawa is a repeating system that enables the control output to travel long distances. Thus Mizokawa is a component of a larger system. It is conventionally known to have a repeater system drive an ultimate load such as a receiver, i.e. an associated circuit.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the system of Mizokawa with an associated circuit because, as the reference is silent on the where exactly the output of element 10 is connected one of ordinary skill in the art would have been motivated to use the component of Mizokawa in any art-recognized system that receives square waves such as the conventional receiver systems.

Claims 7 rejected under 35 U.S.C. 103(a) as being unpatentable over Mizokawa 4,170,715 (Mizokawa) in view of Nguyen et al. 6,781,416 (Nguyen).

Is silent on the driver having "at least one transistor of a first type associated with the first input of the driver and at least one transistor of a second type associated with the second input of the driver, the characteristics corresponding to the relative strengths of the at least one transistor of the first type and the at least (one???) transistor of the second type." The term "associated" is a broad term such that for example if the at least one transistor of the first type is some how coupled with the first input of the driver then this transistor is associated with this input. Note that in this case and for every case the examiner must give the broadest reasonable interpretation to the claim consistent with the specification See MPEP 904.01.

Figure 1 of Nguyen discloses a conventional driver for a square wave. Note the two different types of transistors.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have employed a push pull driver for the amplifier portion of the driver of Mizokawa because, as the Mizokawa reference is silent on the exact circuit one of ordinary skill in the art would have been motivated to use any art recognized equivalent driver circuit such as the push pull circuit taught by Nguyen. Note that relative strengths of the transistors i.e. how much they are turned on is a relative characteristic that allows the driver to "self-bias" to the selected output level. Also as mentioned above, the transistors of this driver would be of two different types i.e. two different conductivities.

Allowable Subject Matter

Claims 3, 4, 8, 9, 10, 11, 14, 15, 17, 18-20, 22, 25, 27and 31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael B. Shingleton whose telephone number is (571) 272-1770. The examiner can normally be reached on Tues-Fri from 8:30 to 4:30. The examiner can also be reached on alternate Mondays. The examiner normally has the second Mondays of the bi-week off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal, can be reached on (571)272-1769. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MBS
November 12, 2004

MICHAEL B. SHINGLETON
PRIMARY EXAMINER
GROUP ART UNIT 2817